

MARYLAND DEPARTMENT OF NATURAL RESOURCES  
Largemouth Bass Fishery – Potomac River



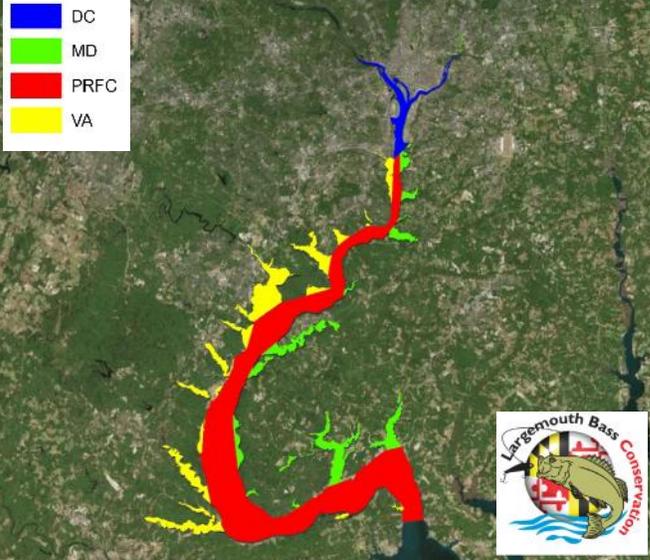
Joseph W. Love, Ph.D.  
Sport Fisheries Advisory Commission  
July 21, 2015



1

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Largemouth Bass Fishery – Potomac River

- Found in most tidal freshwater of Potomac River
- Responsibility to manage the fishery is shared by VA, DC, PRFC, and MD
- A good fishery is owed to a sustainable population



2

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## Largemouth Bass Fishery – Potomac River

- Anglers began telling MD DNR that they were catching fewer fish in fall of 2012.
- Not all anglers reported poor fishing.
- Examination of tournament angler data indicated a seasonal component to poor fishing.

*“They didn’t catch them that good, but we had a great tournament and no issues.” K. Hunt, FWL College, Oct 2014*

*“Springtime fishing was very good...it slowed down as the grass grew in...While fishing was difficult this year, I think the vast acres of hydrilla..that has replaced milfoil in a lot of the river...provided a safe haven for LMB this year.” Capt. S. Chaconas, Nov. 2013.*





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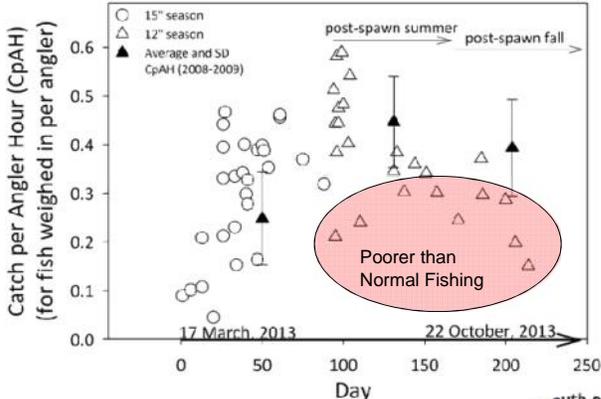
3

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## Largemouth Bass Fishery – Potomac River

- Spring may not be a good season for monitoring number of bass because bass are likely found more easily during the spawning season when they are concentrated in spawning areas.
- In 2013, reported weigh-in rates were less than normal during summer and fall.

Reported Catch from Black Bass Tournament Anglers in 2013 (Potomac River)



Catch per Angler Hour (CpAH)  
 (for fish weighed in per angler)

Day

17 March 2013      22 October 2013

Legend:  
 ○ 15" season  
 △ 12" season  
 ▲ Average and SD CpAH (2008-2009)

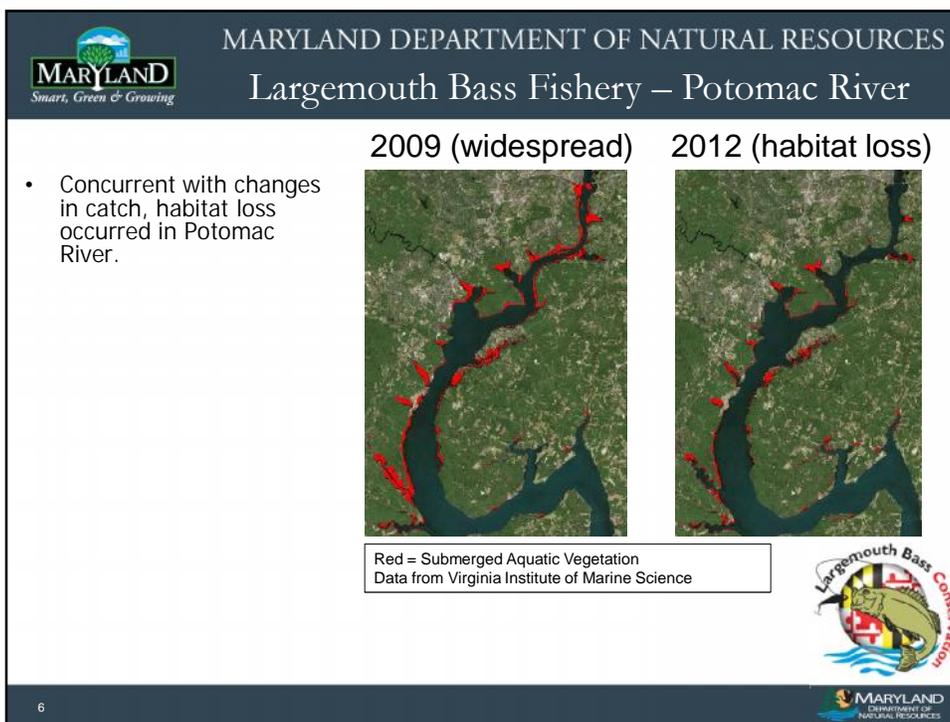
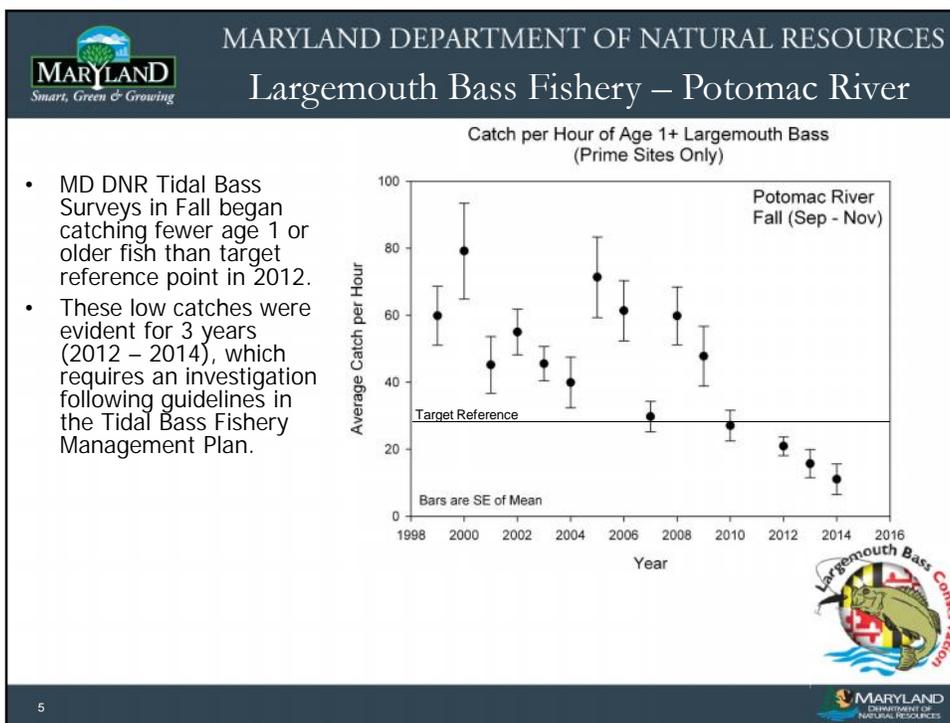
post-spawn summer      post-spawn fall

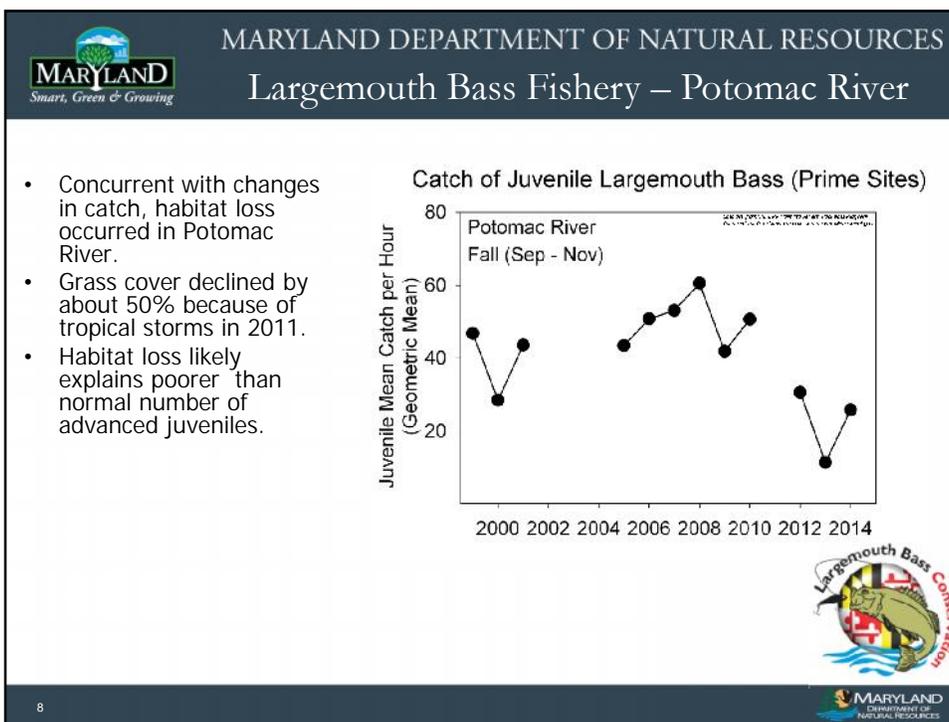
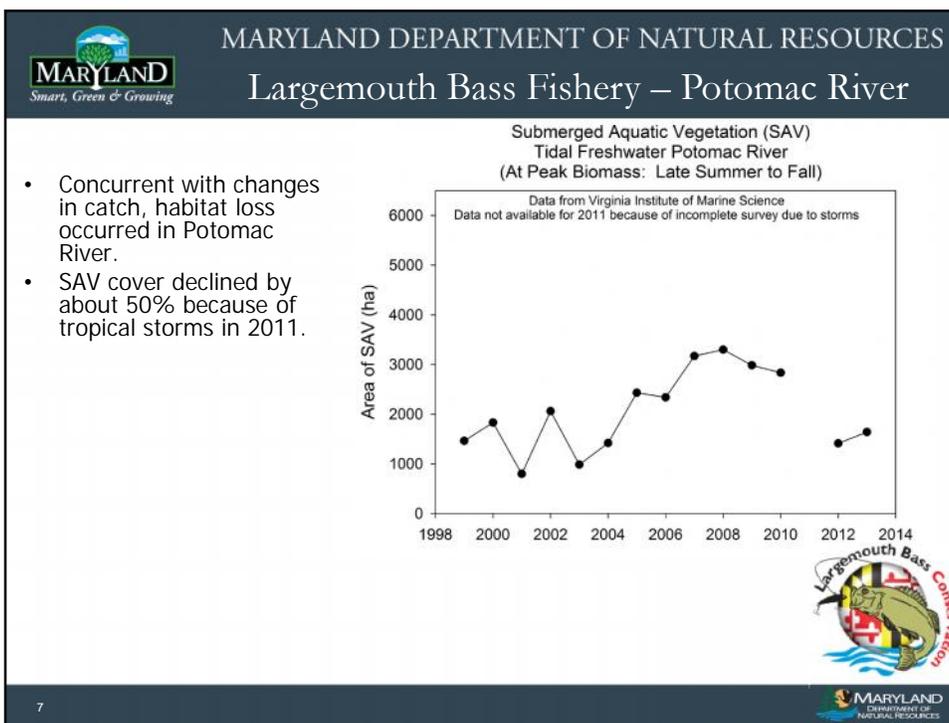
Poorer than Normal Fishing

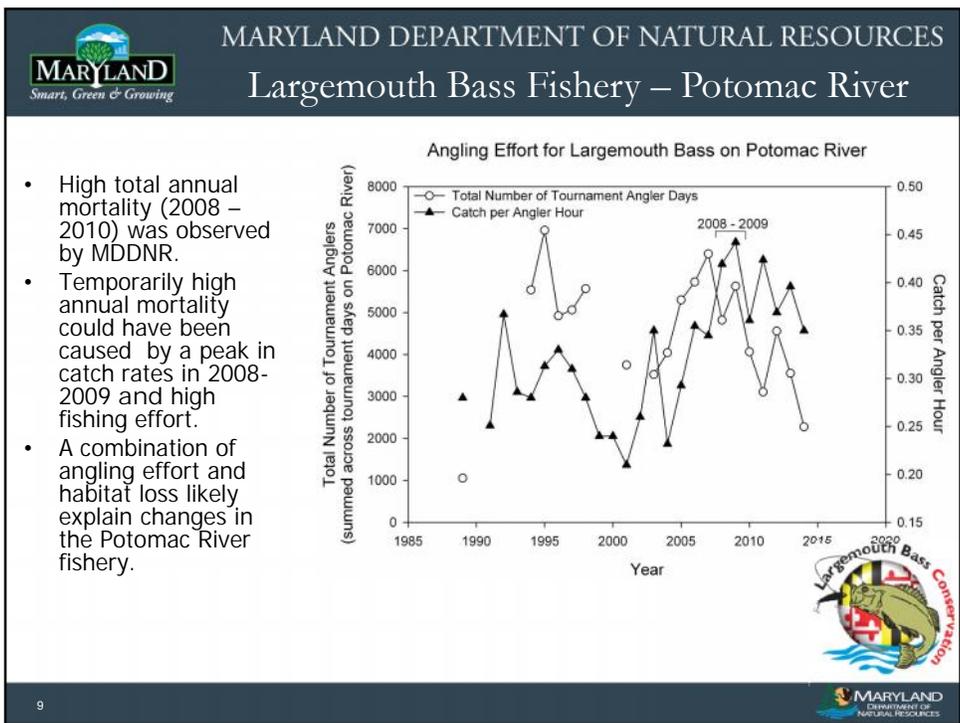


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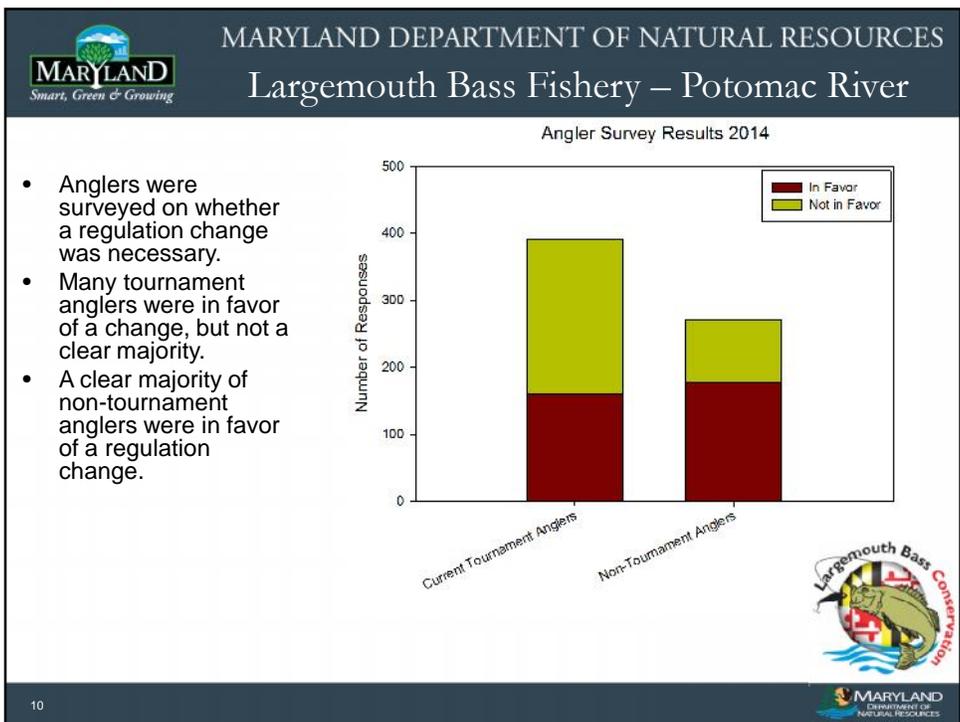
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9



10

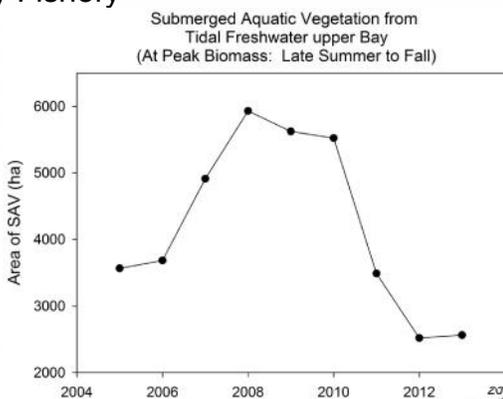


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## Largemouth Bass Fishery – Potomac River

### Upper Chesapeake Bay Fishery

- The fishery in the upper Bay has been growing in popularity.
- As angling popularity increases, angler number and angling effort likewise increase.
- The storms that caused habitat loss in Potomac River also led to habitat loss in the upper Bay.
- Because both angling effort and habitat loss are likely to influence the upper Bay fishery in a similar way as Potomac River, a cautionary approach is proposed.



Submerged Aquatic Vegetation from Tidal Freshwater upper Bay (At Peak Biomass: Late Summer to Fall)





11



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from *Tidal Bass Fishery Management Plan (2015)*  
<http://dnr2.maryland.gov/fisheries/Pages/bass/index.aspx>

Table 8.6.2. A table of potential fishery problems and several possible management actions that can be taken to mitigate the problem. There are 6 potential management actions: A) change in creel limits, B) change or enforce size limit, C) no possession (seasonal or spatial), D) fishing closure (seasonal or spatial), E) stocking, F) habitat enhancement or protection, and G) angler awareness strategies to include multimedia campaigns and seminars. In response to management actions, the indices that are likely to be responsive within 3 years are given. Indices are explained in section 7.0. Abbreviations are: catch per unit effort (CPUE) for all Largemouth Bass and juveniles (Juv), proportional size distribution (PSD) for juveniles, 200-305 mm and 200-381 mm fish, proportional occurrence (OCC) of juveniles among sampled sites, relative weight (Wr), body condition (Kn), instantaneous mortality (Z), growth rates (GR) for exponential (EXP) and von Bertalanffy growth models (VBGF), the slope of the length-weight regression (LW), mortality at the weigh-in scale (IM) for small (Sm) and large (Lg) tournaments (TX), catch per angler hour (CPAH) for tournaments, and the habitat suitability index (HSI).

Problem	Action(s)	Indices
Poor Recruitment	E, F	PSD <sub>305</sub> , Juv <sub>CPUE</sub> , Juv <sub>OCC</sub> , JUV <sub>PSD</sub> , CPUE, Cor-CPUE, HSI
Overfishing	A, B, C, D, G	CPUE, Cor-CPUE, Z, NS and SP CPAH indices for TXs, NS and SP IM indices for Lg and Sm TXs, PSD <sub>381</sub> , PSD <sub>305</sub>
Few Big Fish (overfished)	A, B, C, D, E, G	Z, PSD <sub>381</sub> , CPUE, Cor-CPUE, Juv <sub>CPUE</sub> , SP CPAH for TX
Too Few Fish	A, C, D, E, G	CPUE, Cor-CPUE, NS and SP CPAH indices for TXs
Few Fat Fish	F	W <sub>r</sub> , K <sub>n</sub> , GR-VBGF, GR-EXP, L-W slope
Poor Habitat	F, G	W <sub>r</sub> , K <sub>n</sub> , GR-VBGF, GR-EXP, L-W slope, Juv <sub>CPUE</sub> , Juv <sub>PSD</sub> , Juv <sub>OCC</sub> , HSI

### Problems

→ Poor Recruitment

→ Too Few Fish

### Possible Actions

A) Change in Creel Limit  
 C) No Possession  
 D) Fishing Closure  
 E) Stocking  
 F) Enhance or Protect Habitat  
 G) Angler Awareness Strategies





12

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**DRAFT CONCEPT**

- Annual C&R areas could help maintain a spawning stock in highly productive habitats
- C&R areas may also naturally protect fisheries in some areas from losses when angler removals are high during years with high numbers of tournaments
- Theoretical work completed winter 2015; field work planned fall 2015



13

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# NEXT STEPS

- Action will NOT be adopted in 2016
- Get Input From SFAC:
  - Studies/Surveys we should do in 2015/2016?
  - Scoping suggestions for 2015/2016?

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14

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